

## PROJECT DESCRIPTION

## EQUIPMENT LISTS (CON'T.)

## PHASE CHART

## I. GENERAL

This project involves the installation of a new Traffic Control Signal with street lighting at the intersection of MD 131 and Thornton Road in Baltimore County. MD 131 is assumed to run in an east-west direction.

## II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA four-phase, fully-actuated mode, with the MD 131 approaches running concurrently. The Thornton Road approaches shall also run concurrently.
- A full-traffic-actuated, eight-phase controller with three (3) four-channel, rack mount loop detector amplifiers, Intersection Monitor with battery back-up for phone drop and associated harnesses housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

## III. SPECIAL NOTE

The Contractor shall be responsible for terminating all signal cables to the appropriate terminals and shall properly label each cable.

## EQUIPMENT LISTS

## A. EQUIPMENT TO BE SUPPLIED BY S.H.A.

ITEM NO.	QUANTITY	DESCRIPTION
9001	4 Each	8", one-way, three-section (R,Y,G) traffic signal head with adjustable bracket for mast arm mounting.
9002	8 Each	12", one-way, three-section (R,Y,G) traffic signal head with adjustable bracket for mast arm mounting.
9003	1 Each	Eight-phase, full-traffic-actuated, solid state digital controller with three (3) 4-channel, rack mount loop detector amplifiers, Intersection Monitor with battery back-up for phone drop and associated harnesses housed in a NEMA size "6" base-mounted cabinet.
9004	54 S.F.	Sheet aluminum signs to consist of: 4 EA W3-3 NEW "SIGNAL AHEAD" sign, (36" x 36") ground mounted with hardware. 2 EA D3-2 "Thornton Rd" sign, (variable x 16") ground mounted with hardware.
9005	28 S.F.	Sheet aluminum signs to consist of: 2 EA D3-2 "Thornton Rd" dual faced sign, (variable x 16") mast arm mounted. 2 EA D3-2 "Seminary Ave" dual faced sign, (variable x 16") mast arm mounted.

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR. (CON'T.)

ITEM NO.	QUANTITY	DESCRIPTION
8027	70 L.F.	Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
8028	200 L.F.	Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) (slotted).
8030	30 L.F.	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
8033	11 Each	Furnish and install handhole (frame and cover).
8034	4 Each	Furnish and install ground rod, 3/4" diameter x 10' length.
8040	1850 L.F.	Furnish and install loop wire (No. 14 A.W.G.) encased in 1/4" flexible tubing.
8041	510 L.F.	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.) (aluminum shielded).
8044	220 L.F.	Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).
8045	1470 L.F.	Furnish and install 7-conductor electrical cable (No. 14 A.W.G.).
8046	180 L.F.	Furnish and install 2-conductor electrical cable (No. 12 A.W.G.) type THHN tray cable.
8049	380 L.F.	Furnish and install stranded bare copper ground wire (No. 6 A.W.G.).
8052	72 L.F.	Furnish and install wood sign supports (4" x 6").
8053	54 S.F.	Install ground mounted sheet aluminum signs.
8054	28 S.F.	Install overhead mounted sheet aluminum signs.
8056	1 Each	Furnish and install 250W-HPS luminaire.
8057	1 Each	Furnish and install 10' lighting arm.
8070	1 Each	Furnish and install control and distribution equipment.
8081	1 Each	Furnish and install 27' steel pole with a 38' mast arm. (Note: 4 anchor bolts will be 1 3/4" x 90".) (Note: Pole shall be cut to 21' height.)
8081	1 Each	Furnish and install 27' steel pole with a 38' mast arm. (Note: 4 anchor bolts will be 1 3/4" x 90".) (Note: 38' mast arm shall be cut to 34' length.)
8085	1 Each	Furnish and install 27' steel pole with twin 50'-60' mast arms. (Note: 4 anchor bolts will be 1 3/4" x 90".) (Note: 50' mast arm shall be cut to 40' length.)

## CATEGORY 800

## UTILITIES

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 Each	Maintenance of traffic.
2001	4 C.Y.	Test pit excavation.
5004	120 L.F.	Furnish and install thermoplastic pavement marking tape, white (24" width for stoplines).
8001	18 C.Y.	Furnish and install concrete foundation.
8002	3 Each	Furnish and install grout.
8006	3 Each	Cut, clean, galvanize and cap traffic signal structure.
8011	4 Each	Install 8", one-way, three-section traffic signal head, mast arm mount.
8011	8 Each	Install 12", one-way, three-section traffic signal head, mast arm mount.
8016	5 Sets	Furnish and install microloop probe set with 500' lead-in cable.
8020	1 Each	Install base-mounted cabinet and controller.
8021	695 L.F.	Furnish and install sawcut.
8023	45 L.F.	Furnish and install 1" liquid tight flexible non-metallic electrical conduit (detector wire sleeve).
8024	590 L.F.	Furnish and install 2" polyvinyl chloride electrical conduit (Schedule 80) (trenched).

The following contact persons for District #4 are as follows:

Mr. Charles Harrison  
District Engineer  
Phone: (410) 321-3461

Mr. Randall Scott  
Assistant District Engineer - Traffic  
Phone: (410) 321-3468

Mr. Allen Aultson  
Assistant District Engineer - Maintenance  
Phone: (410) 321-3468

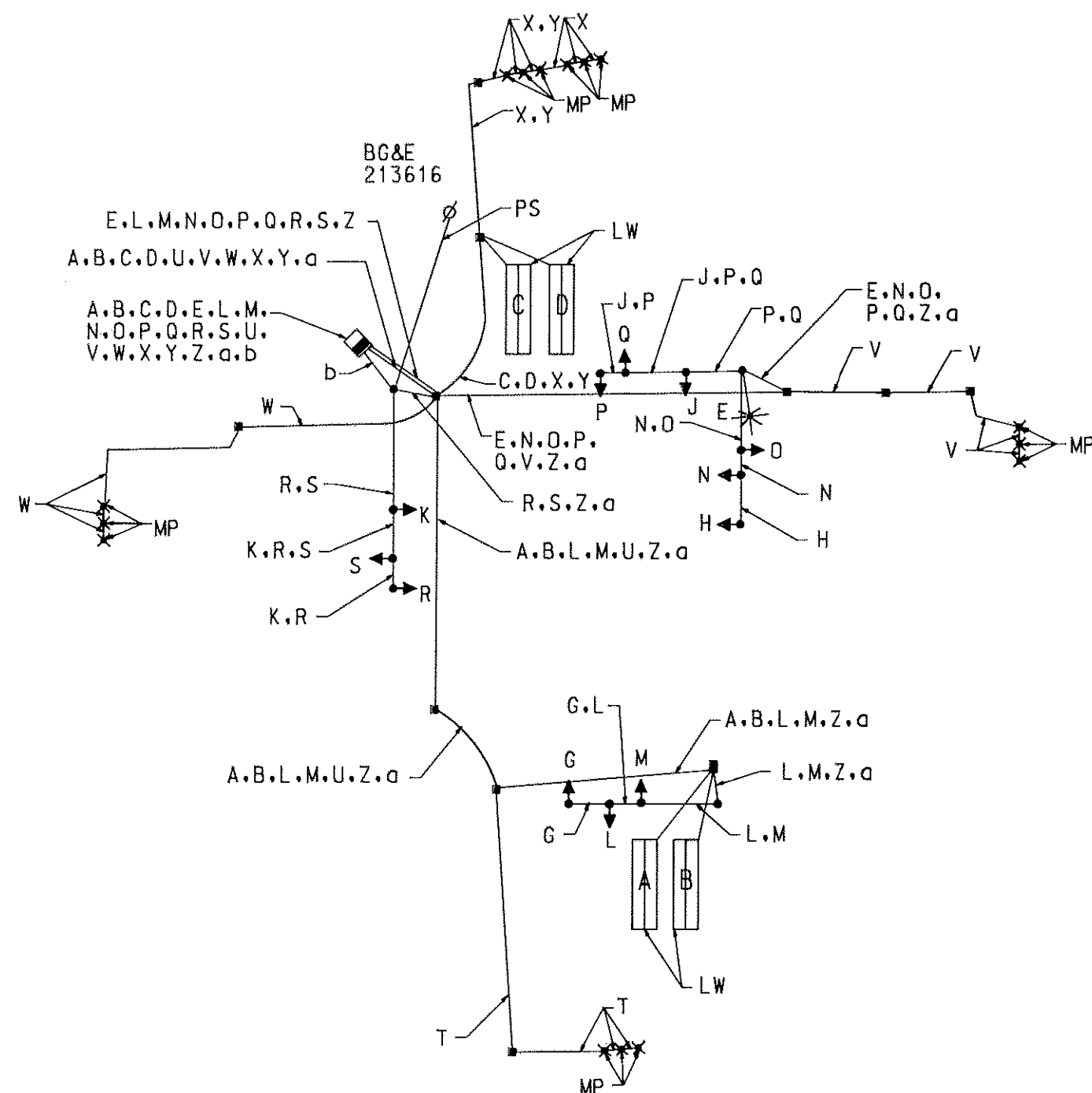
Mr. Joe McMahon  
Assistant District Engineer - Utility  
Phone: (410) 321-3456

Mr. Richard L. Daff, Sr.  
Chief, Traffic Operations Division  
Phone: (410) 787-7630

The power company representative is:

Mr. Joe Bunch  
Baltimore Gas & Electric Company  
Customer Operations  
7317 Parkway Drive, South  
Hanover, Maryland 21096  
(410) 859-9042

	1	2	3	4	5	6	7	8	9	10	11	12
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R



WIRING KEY	
A B C D	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)
E	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) COPPER TYPE THHN TRAY CABLE
G H J K	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
L M N O P Q R S	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
U V W X Y Z	MICRO-LOOP LEAD-IN CABLE (HOME-RUN CABLE)
a	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
b	3-WIRE ELECTRICAL CABLE (NO. 4 A.W.G.)
LW	LOOP WIRE (NO. 14 A.W.G.)
MP	MICRO-LOOP PROBES (MODEL 20002)
PS	PROPOSED OVERHEAD SERVICE TO BE INSTALLED BY BGE.

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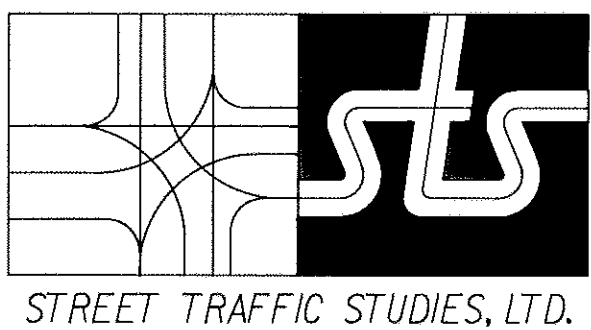
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7317 Parkway Drive, South  
Hanover, Maryland 21096  
(410) 859-9042



Gateway International  
1302 Concourse Drive, Suite 104  
Linthicum, Maryland 21090  
Ph (410) 859-3553  
Fax (410) 859-3579

TASK10G1

## REVISIONS

## APPROVALS

ASST. CHIEF TEDD SECTION

ASST. DISTRICT ENGINEER, TRAFFIC

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, TRAFFIC & SAFETY



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION

MD 131 AND THORNTON ROAD

DRAWN BY: THACKER  
CHECK BY: R. R. ZACHERL  
DATE: 12-4-97  
SCALE: N/A

COUNTY: BALTIMORE  
LOG MILE: \_\_\_\_\_  
F.A.P. NO. \_\_\_\_\_  
S.H.A. NO. *AW27845A 105A*

TS NO.  
3758  
T.I.M.S. NO.  
C-563

SHEET NO.  
2 OF 2